Volume 25 Contents

January

Editorial 1
Minireview: Lipases—Enzymes at an Interface. J Gill and J H Parish 2
Tomorrow's Doctors Today: Innovations in Medical Teaching and Learning—Responding to the Challenge of Tomorrow's Doctors. R G Dennick and K Exley 6
A Survey of Final-year Undergraduate Laboratory Projects in Biochemistry and Related Degrees in Great Britain. C A Austin 12
Teaching Biochemistry to Medical Technology Students. B Gomez-Silva, A Alvarez and A Quaas 15
Clinical Biochemistry Classes in Medical Technology at the University of Talca, Chile. M L Nuñez 17
Hints on Memorizing Biochemistry—Helping Students Remember Basic Facts. E Forouhi 18
Teaching the Urea Cycle: The Role of Liver in Acid–base Regulation. U Anand and C V Anand 20
Features Section
Problem-based Learning. C A Smith 22
A Problem-based Learning Approach to a Biological Chemistry Laboratory Class for Students of Veterinary Science. V A Rivarola, J R Bergesse, M B Garcia and A C Fernandez 22
Regulation of Photosynthetic Enzymes via Redox Systems. P Baret and F Cadet 24
Computer Aided Learning. G R Parslow 27
Using HyperCard to Present Experiments from the Research Laboratory to Undergraduates. J Carrington and G Yau 28
Biotechnology Education. R O Jenkins 30
The Biotechnology Enterprise Project: An Exercise on the Detection and Development of Business Skills in an Undergraduate Biotechnology Module. M Burachik, M Vazquez and A Koss 31
Experimental Section
Biomolecular Modelling with Wire, PVC and Plasticine: A Cheap and Versatile System for Classroom Use. P del Castillo and P L Mason 35
Simulated Western Blot for the Science Curriculum. P J Cummings 39
Developing a Dye-based Method of Protein Quantitation on Nitrocellulose. J P D Goldring and L Ravaioli 40
Isolation of Nuclear, Chloroplast and Mitochondrial DNA from Plants. J Day 41
Change in Carbohydrate Content During Chickpea Cooking: A New Approach of Teaching of Carbohydrate Chemistry in Biochemistry Course. V H Mulimani, S Thippeswamy and Ramalingam 44
Letters to the Editor 46
The International Consortium for Education Development in Higher Education 47
Book Reviews 49
Monitor 57
Announcements 58

April

Editorial 61
Further Reflections on Metabolic Cartography—Twenty-five Years on. D E Nicholson 62
24th FEBS Meeting, Barcelona, Spain, 7th–12th July 1996 71
Teaching Biochemistry at a Medical Faculty with a Problem-based Learning System. J Rosing 71
Biochemistry Teaching in Integrated Curricula. F Vella 75
Medical Education in the UK: The Effects of the GMC Report, *Tomorrow's Doctors*, and the Movement Towards Integration. E J Wood 77
Teaching of Biochemistry in Integrated Curricula: Experiences in Hungary. G Banfalvi 79
Teaching of Biochemistry at the Faculty of Medicine of the University of Barcelona: a New Integrated Curriculum. J Carreras 81
Transformation of the Teaching of Medical Chemistry and Medical Biochemistry, in Relation to Other Medical Disciplines at the Faculty of Medicine, Comenius University, Bratislava. L Bergendi, J Carsky and L Halcak 82
Announcement 85
How to Name Various Transport Mechanisms and Their Vehicles. A Kotyk 86
Energy Diagrams for Enzyme Catalysed Reactions: a Confusing Point in the Textbooks. I Núñez de Castro and F J Alonso 87

Reflections on the First Pan-African Conference on Biochemistry and Molecular Biology. D W Makawiti 90
Workshop on Biochemical Education 93
Features Section
Problem-based Learning. C A Smith 94
Computer Aided Learning. G R Parslow 96
A Self-instructional Approach to the Teaching of Enzymology Involving Computer-based Sequence Analysis and Molecular Modelling. P V Attwood 97
Software Reviews 100
Biotechnology Education. R O Jenkins 102
Enhancing the Internationalisation of Distance Education in the Biological Sciences: the DUNE Project and Genetic Engineering. C K Leach, R O Jenkins and M C E van Dam-Mieras 102
Announcements 104
Experimental Section
A Simple Laboratory Experiment for the Teaching of the Assay and Kinetic Characterization of Enzymes. L R Vicario, D F Gómez Casati and A A Iglesias 106
A Demonstration of Genomic DNA Profiling by RAPD Analysis. J B W Hammond and G S Spanswick 109
Letters to the Editor 112
Book Reviews 113
Monitor 116

July

Editorial 117
Mammalian Haem Oxygenase—a Tale of Two Enzymes. A Rowe and J D Houghton 118
How Much Biochemistry Should a Good Doctor Know? M Saffran 129
A Glove Analogy for Describing the Ionization of Amino Acids. E Schultz 133
Poster Design—Six Points to Ponder. B S Brown 136
Workshop on Education in Lithuania. Challenges of Biomedical Education 138
Workshop on Biochemical Education, Buenos Aires, Argentina, 15–16th April, 1997 139
Workshop on Biochemical Education, Chile, 9–10th April. 1997 141
Joint Medical Science Center of Peking University and Beijing Medical University in China. Guo-guang Dua, Hong-ti Jia and Sheng-geng Zhu 142
Features Section
Problem-based Learning. C A Smith 143
Enzyme Kinetics: Partial and Complete Competitive Inhibition. C G Whiteley 144
Integrated Problem Based Learning for First Year Medical Students: Does it Teach Biochemical Principles? C L Harris, G Güner, J Arbogast, L Salati, J M Shumway, J Conners and D Beattie 146
Computer Aided Learning. G R Parslow 151
CD-ROM Review. 156
Biotechnology Education. R O Jenkins 157
Training Biotechnologists for the Future: Academia and Industry Collaborate to Develop a Hands-on Undergraduate Biomedical Research Curriculum. J Hadfield, P Cummings, S Rowland, K Adams and D Harmening 157
Classification of Proteases Without Tears. F L Garcia-Carreno and M A Navarrete Del Toro 161
Web Watch/Announcements 167
Experimental Section
The Thermodynamic Stability and Catalytic Activity of Yeast Alcohol Dehydrogenase at Different pH Values: an Undergraduate Biochemistry Investigation. R L Taber and J W Ladwig 169
Molecular Genetic Diagnosis by the Polymerase Chain Reaction: Detection of the Arg 614 to Cys Substitution in the Human Skeletal Muscle Ryanodine Receptor Gene in Malignant Hyperthermia. A Beyer and M. Varsanyi 170
Use of an Induction Experiment in Student Classes. V H Mulimani and Ramalingam 173
Letters to the Editor 175
Boehringer Mannheim Biochemical Pathways on the Net 175
Videotape Review 176
Book Reviews 177
Monitor 187

October

Editorial 189
Announcement 190
New Targets for Antimalarial Therapy: The Plasmepsins, Malaria Parasite Aspartic Proteinases. C Berry 191
Announcements 194
Biochemistry in the United States Medical Licensing Examination Step 1 Content Outline: Organ Systems. M Saffran 195
Optimization of Glycolysis: A New Look at the Efficiency of Energy Coupling. T G Waddell, P Repovic, E Melendez-Hevia, R Heinrich and F Montero 204
A Guided Discovery Approach for Learning Glycolysis. E Schultz 205
Topology of DNA: When Manipulation Supports the Lack of 'Space-filling' Imagination. G Balliano and P Milla 209
The Hard Sciences and the Humanities. W N Arnold 211
When are Nucleic Acids Not Nucleic Acids? Problems With Estimation of Nucleic Acid Purity by UV Absorbance. K L Manchester 214
Are Fischer Projection Formulas Really Necessary. R Bentley 216
Features Section
Problem-based Learning. C A Smith 221
Data Handling Problems in Cell Biology. M M Dawson, P Kumar and C A Smith 222
Announcement 223
Computer Aided Learning. G R Parslow 224
Software Review 225
Miscellaneous Bytes of Information 226
Biotechnology Education. R O Jenkins 230
Biotechnology Programme at Gulbarga University, Karnataka State, India. V H Mulimani 230
Web Watch/Announcements 231
Biotechnology Book Reviews 232
A Fast CTAB Method of Human DNA Isolation for Polymerase Chain Reaction Applications. J C Thomas, R Khoury, C K Neeley, A M Akroush and E C Davies 233
Inhibition of Cholinesterase by Insecticides. J M Lai and J W Ho 235
Making Your Own Gene Library. J E Pérez-Ortín, M Li Del Olmo, E Matallana and V Tordera 237
Letters to the Editor 241
Book Reviews 243
Monitor 254